

REMARKS

The application has been reviewed in light of the Non-Final Office Action mailed August 4, 2005. At the time of the Non-Final Office Action, claims 1-22 were pending in this application. Claims 1, 9, and 11 have been amended. Claims 5 and 12-21 have been cancelled. Claim 23-33 have been added.

Claims 1- 11 stand rejected in view of prior art. For the reasons discussed below, the Applicants believe that all of the remaining claims are patentable over the cited prior art, and therefore respectfully traverse Examiner's rejections.

I. 35 U.S.C. § 112 Rejections

Claims 1-11 stand rejected under 35 U.S.C. § 112, second paragraph. Examiner writes, "Regarding claim 1, Applicant should clarify what is intended by a coating layer *"formed of a material more easily formed to precise tolerances than silicon nitride."*

As the originally-filed specification explains, one of the challenges in forming precise grooves in a ceramic material such as silicon nitride is that silicon nitride is a "very hard material." *See Originally-filed Specification*, para. 3. Indeed, because of the hardness of silicon nitride, conventional machining of the silicon nitride to form the precise grooves necessary is not possible, and therefore, a manufacturer has to resort to more complicated and more costly processes such as grinding. *See id.* One of the advantages of using a coating layer that is softer than silicon nitride is that other processes besides grinding may be used. Other processes that are less complicated and less expensive than grinding include machining, chemical or electromagnetic etching, casting techniques, injection or compression molding, etc. *See id.* at para. 7. Thus, the word "formed" includes any of the methods contemplated by the originally-filed specification for creating or enhancing grooves in the coating layer. *Id.* Further, the language, "more easily formed to precise tolerances than silicon nitride" refers to materials that

have a lower degree of hardness (*i.e.* are softer) than silicon nitride. As the hardness of silicon nitride is a value known by a person of ordinary skill in the art, determining which materials are softer than silicon nitride is within the capability of a person of ordinary skill in the art without undue experimentation. Examples of materials which are softer than silicon nitride include, but are not limited to, those materials enumerated in the originally-filed Specification, such as polyetheretherketone, epoxies, glass-filled epoxies, powdered ceramics, or any combination thereof. *See e.g., id.* at para. 19.

As to claims 9 and 11, the amendments to claims 9 and 11 address Examiner's astute observation as to the antecedent basis therein.

II. 35 U.S.C. § 102(e) Rejections

Claims 1, 3, and 7-11 stand rejected under § 102(e) as being anticipated by U.S. Patent No. 6,535,094 issued to Murata *et al.* [hereinafter *Murata*]. Applicants respectfully traverse on the basis of the amended claims.

Applicants respectfully submit that *Murata* does not anticipate the rejected claims as amended, because *Murata* does not teach or suggest each and every element set forth in the claims. To form a basis for a 35 U.S.C. § 102(e) rejection, a prior art reference must disclose each and every element as set forth in the claim. *See* MANUAL OF PATENT EXAMINING PROCEDURE § 2131 (2004). *Murata* does not contain each and every element of the claimed invention and as such, does not anticipate Applicants' invention as defined in amended independent claim 1 and therefore, dependent claims 3 and 7-11.

In particular, *Murata* fails to teach or suggest the limitation, "wherein a plurality of grooves are formed into the coating layer." *Murata*, on the other hand, does seem to teach, in some embodiments, using an "insulating coating film" around a "core member." *See Murata*, col. 3, lines 35-51. Nevertheless, this "insulating coating film" appears to be used to provide

conductive isolation between the later-applied “thin-film conductor” and “the core member” or in some cases, the “insulating coating film” may be used for protection of the “core member.” *See id.* In any case, *Murata* does not teach forming grooves into this “insulating coating film.”

Murata does, however, appear to teach an “insulating layer” that may be applied for the purpose electrical isolation or insulation of the “thin-film coil” that may be formed after application of a “thin-film conductor.” *See id.* at col. 4, lines 1-7. Again, *Murata* does not appear to teach forming grooves into this “insulating layer” either.

Applicants respectfully submit that the “spiral coil-forming groove” described in *Murata* refers instead to a “spiral coil-forming groove” of the thin-film conductor formed by irradiation by a laser beam and not a groove formed into the “insulating coating film” nor the “insulating layer” of *Murata*. Thus, *Murata* does not teach forming a plurality of grooves in a coating layer. As *Murata* does not teach this element of Applicants’ amended independent claim 1, *Murata* does not anticipate Applicants’ claim. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 102(e) rejection as to independent claims 1, and correspondingly, dependent claims, 3 and 7-11.

III. 35 U.S.C. § 103(a) Rejections

Claims 2 and 4-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Murata*. Claim 5 has been cancelled and is therefore no longer relevant to this rejection. Applicants respectfully traverse on the basis of the remaining amended claims.

A prima facie case of obviousness requires a showing that all claim limitations be taught or suggested by the prior art. M.P.E.P. § 2143.03. Applicants respectfully submit *Murata* fails to yield a process within the scope of the Applicants’ claims. *Murata* fails to form a proper basis for a prima facie case of obviousness, because it fails to teach all of the limitations of the claimed invention.

In particular, as to independent claim 1, as explained above in section II, *Murata* fails to teach or suggest the limitation, “wherein a plurality of grooves are formed into the coating layer.” Accordingly, *Murata* cannot form a proper basis for a prima facie case of obviousness as to independent claim 1 and correspondingly, as to dependent claims 2, 4 and 6.

Furthermore, as Examiner acknowledges, *Murata* fails to disclose the specific materials claimed in claims 2 and 4. Examiner has provided no evidence or finding of the specific understanding or principle within the knowledge of a person of ordinary skill in the art at the time of the invention that would have supplied the motivation to modify the cited reference so as to include the missing elements. See M.P.E.P. § 2143.03. As to claim 6, Examiner writes, “. . . it would have been an obvious design consideration to include groove(s) in the coating layer of Murata et al. for the purpose providing space for the conductive coil and reducing size of the device.” As provided in M.P.E.P. § 2144.03(C), a conclusion as to the supposed action of a person of ordinary skill in the art is insufficient to establish a prima facie case of obviousness. To the extent that Examiner relies on such a statement or statements to supply the necessary motivation to modify the prior art references, Applicants hereby respectfully traverse the lack of such a showing and request under M.P.E.P. § 2144.03(C) that Examiner supply an affidavit or other documentary proof establishing the prior art knowledge that would have motivated a person of ordinary skill in the art to make the specific modification and/or combination of elements to arrive at Applicants’ invention.

The M.P.E.P. also makes clear the requirement that Examiner provide objective reasons to modify the references apart from naked statements that “it would be obvious to a person of ordinary skill.” M.P.E.P. § 2143.01 (explaining that “A statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill of the art’ at the time the claimed invention was made’ because the references relied upon teach that

all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references.” (citations omitted)).

Thus, Applicants respectfully submit that *Murata* fails to disclose all of the limitations of Applicants’ claims and furthermore, that it would not have been obvious for a person of ordinary skill to modify the references so as to include the missing elements. Further, the references contain no suggestion or motivation to modify the references to arrive at the specific combination of elements of the present invention. Thus, for at least these reasons, Applicants respectfully request the removal of the 35 U.S.C. § 103(a) rejection as to the claims 2, 4, and 6.

IV. New Claims 24-33

Examiner writes “Regarding claim 8, *Murata et al.* inherently discloses that the ceramic core has a thermal expansion coefficient of less than about 1.8×10^{-6} per °F in a temperature range of below 0°F to about 1400°F.” *See Office Action* at 3. To the extent that Examiner’s remarks may relate to added independent claim 24, in the interest of advancing prosecution of these claims, Applicants respectfully submit that *Murata* does not specifically disclose any ceramic material having a thermal expansion coefficient of less than about 1.8×10^{-6} per °F in a temperature range of below 0°F to about 1400°F, nor has any showing been made that any of the disclosed ceramic materials for the “core member” of *Murata* inherently possess a thermal expansion coefficient of less than about 1.8×10^{-6} per °F in a temperature range of below 0°F to about 1400°F. The one example of a ceramic material given by *Murata* is “nonmagnetic alumina.” *See Murata*, col. 3, line 34. Yet, no showing has been made that this material inherently possesses a thermal expansion coefficient of less than about 1.8×10^{-6} per °F in a temperature range of below 0°F to about 1400°F. Accordingly, Applicants respectfully submit

that *Murata* does not explicitly disclose the elements of independent claim 23 nor does *Murata* disclose any embodiments that inherently disclose each and every element of independent claim 23.

SUMMARY


In light of the above amendments and remarks, Applicants respectfully submit that the application is now in condition for allowance and early notice of the same is earnestly solicited. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile or electronic mail, as indicated below.

Applicants believe that no fees are due in association with the filing of this Response. However, should the Commissioner deem that any fees are due, including any fees for any extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition therefore, and directs that any fees be debited from Baker Botts L.L.P., Deposit Account No. 02-0383, (*formerly Baker & Botts, L.L.P.*) Order Number 063718.0342.

Respectfully submitted,

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